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# **VYGOTSKY'S CO-CONSTRUCTION PRINCIPLES: BRIGHT CHILDREN AS TEACHERS IN ZIMBABWEAN INFANT SCHOOL**

**Roswitta Gatsi and Professor Chipo Dyanda**  
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## **ABSTRACT**

*This study investigated the nature of knowledge co-construction between more and less competent children who are often paired as learning partners in Zimbabwean infant classes. A sample of thirty-six (36) pairs of children in the six to eight year age range from infant classes participated in the study. The data were collected using the Flanders Interaction Analysis Categories coding system and were analysed and interpreted through simple descriptive statistics. Overall, the study established that more able partners tended to monopolise the performance of tasks while the less competent partners passively followed what they were instructed to do. The interactive patterns between sets of children showed that bright children tended to tell answers to and work out problems for their less able partners instead of mediating for their partners' difficulties. In turn, the strategies for less able partners included following instructions without question and sometimes giving no responses due to lack of clarity of concepts or demands from their more able partners. The conclusion of the study was that although the young partners may be competent, they may not have efficient co-construction skills which are a core demand in Vygotsky's co-construction paradigm. The idea of using bright children as teachers for the less competent ones in the infant class, under the assumption that they would co-construct knowledge may be questionable.*

## **Background to the study**

The study emerges from a cognition theory posited by Vygotsky who asserts that cognition is a process of acquiring culture and it develops between an expert who has more experience with the culture; who is often the adult and a novice; who needs to learn about the culture; who is often the child (Vygotsky, 1962). Specifically, the study investigated the co-construction of knowledge between pairs of children in Zimbabwean infant classes (Grades 1–3). The theory is an alternative to other cognitive theories like that of Piaget which asserts that the origins of cognition are maturation and the child's interaction with the physical environment (Woolfolk, 1995). Piaget views the child as a 'lone scientist' who constructs his/her own knowledge through manipulation of objects in the

environment whereas Vygotsky views the development of knowledge as emerging from a socio-cultural co-construction process between two individuals, one of whom is an expert.

Vygotsky's theory has a socio-cultural perspective to the development of cognition. This perspective seeks to explain the growth of an individual's knowledge in terms of opportunities, guidance and support provided by the broader cultural context (Berger & Thompson, 1996). Vygotsky argues that the child's intellect cannot be considered in a social vacuum. He proposes four principles of co-construction of knowledge. First, culture is central to the development of cognition. Vygotsky's theory denies strict separation between the individual and his/her own culture. He contends that cognition is formed and developed by the cultural experiences around the child and, thus, each society develops, in its children, skills that are peculiar and are of value to that society. These cultural experiences are held by adults of the culture.

Second, the transmission of culture happens as the child interacts with someone who knows more about the culture than the child. The social interaction with a more skilled partner is the means by which children begin to develop skills and cultural tools with a high premium in their society.

Third, social interaction between the less able child and the more capable other takes place at two levels which Vygotsky calls the inter and intra psychological planes (Lantolf & Appel, 1994). At the inter psychological plane, the expert and the novice co-construct knowledge, sharing information, negotiating and modifying it to come up with an agreed end result. The novice, thus, advances his/her skills through shared knowledge. At the intra psychological plane, the novice integrates the co-constructed knowledge with his own pre-existing set of repertoires and gained knowledge is possessed as his/hers and can be used to solve problems in similar situations independently. The last principle states that the child's development takes place through the Zone of Proximal Development (ZPD). This is a psychological field of learning that is constructed for the child by the expert to learn and develop skills that the child cannot do alone, but with the assistance or guidance of a more capable person. To Vygotsky, the child needs some structure, clues or reminders and encouragement to keep trying in problem solving situations. The ZPD is, therefore, important since development can only take place when the ZPD is created for the child as a learning environment for nurturing his potential. The role of the adult, thus, is to assist the child to solve more and more complex problems as the child gradually gains independence in problem solving.

From the outlined principles, the study emerges from Vygotsky's argument that an adult is the most appropriate co-constructor of knowledge with the child. Neo-

Vygotskiyans such as Rogoff strongly support the use of more capable peers as teachers of the less able children (Rogoff, 1990). For Rogoff, when children interact with the more capable peers or adult members of society, it is like undergoing apprenticeship in that particular skill. In Zimbabwe, today, peer teaching can be observed in most classrooms. Bright children are used as teachers of their less competent peers as they "assist" others in assigned group or pair tasks.

This assistance was the subject of this investigation. From that perspective, the study saw an opportunity to examine or analyse the skills used by more and less competent children to co-construct, if at all. The study investigated whether children display co-construction skills such as sharing ideas, cooperation, negotiation and compromise. Cooper (1980) points out that in many classrooms, children work in pairs or small groups and teachers assume that they are learning together or helping each other. Murray (1980) concludes that it is important to know how children communicate in problem solving situations. In support, Goodlad & Hirst (1989) admit that while peer tutoring encourages collaboration between learners, not all students will be good teachers and the level of instruction offered by a peer may not be high enough.

The study, therefore, examined the nature of co-construction of knowledge between the more and less capable children in Zimbabwean infant classes. Of specific interest were not only the collaboration skills that children use, but to also test the efficacy of Vygotsky's theory of using more capable partners in co-construction of knowledge. The Zimbabwean infant classes appeared to provide opportunities for such investigation.

The major question and sub questions guiding the study were as follows:

### **Major Question**

What is the nature of co-construction of knowledge between bright children and their less able partners in Zimbabwean infant classes?

### **Sub Questions**

1. How do bright children teach their less able partners in a given task?
2. How do the less competent and the more competent children respond to each other during co-construction?
3. What is the level of participation of each child during co-construction?

## Methodology

The study used both qualitative and quantitative research designs. The qualitative design was used to describe the nature and quality of the co-construction. The quantitative design quantified the type of responses between the partners and used the Flanders Interaction Analysis Categories coding system to do so (**Appendix 1**). The Flanders Interaction Analysis system has the capacity to extract qualitative attributes and also make a count of those attributes to allow for descriptive analysis. This system is one of the best-known techniques for classroom observation (Parrot, 1986). The qualitative design allowed for characteristics of co-construction to emerge, first from general observation and then code them later to determine the frequency of occurrence for that behaviour in the 36 co-construction papers. The observations were also designed to check if children display the key known attributes of co-construction of knowledge such as cooperation, negotiation, compromise and sharing.

## Instrument and Observations

The Flanders Interaction Analysis Categories (FIAC) coding system, adopted from Ned Flanders coding system, was used as the observation instrument. The Flanders system is one of the best-known techniques for classroom observation (Parrot, 1986). In this study, the Flanders system was used to analyse the interaction between the bright child and a less able partner in a given task. FIAC system was used in three ways. First, to code the behaviours that were displayed by children during observations; second, to compare the observed behaviour and the known key attributes of co-construction (cooperation, negotiation, compromise and sharing); third and finally, to determine the frequency of observed behaviour. Video tapping facilitated the capturing of all interactions and a transcript for each pair of children was produced after play back.

The observation period was divided into brief time segments of one minute each. Each partner in the different pairs had to be observed and coded each minute. The average length of time taken in each task was ten minutes. The tasks which children worked on were assigned by their teachers during the usual classes. The tasks ranged from English and ChiShona reading, number work some of which comprised story sums, and corrections of written work from previous lessons, predominantly English and Mathematics exercises.

The main purpose of observing the interaction was to find out the skills that the bright child uses to teach the less able partner. Variables for the skills were coded to see if they matched the attributes of co-construction of knowledge like cooperation, negotiation, compromise and sharing. Responses of the less able peer to the teaching of the bright partner were also considered in the analysis of the interaction. The responses of each child were, thus, recorded separately as

per the observation schedule (FIAC). Observations were very rich as video tape recording was used to record all interactions in the thirty-six pairs of children. Coding was then done through play back of the video tape.

### **Location of the Study**

The study took place in the Mashonaland Central province of Zimbabwe and specifically in Bindura urban district. Mashonaland Central province is located in the north-eastern part of Zimbabwe and Bindura is a small town in the province and is 89 kilometres north-east of Harare, the capital city of the country.

Three primary schools were selected for the study. These schools have a relatively large catchment area which includes one low density suburb, two medium density suburbs and three high density suburbs. The community in this catchment area is composed of families of a status ranging from low to middle class. Of the three schools serving the population, two are group B (that is, a former all-black government school), and one is a former group A school (meaning, a former whites-only government school).

### **The sample**

Thirty-six pairs of children participated in the study. This sample represented 16% of the target population. The sample was representative as it reflected characteristics of the target population. All pupils were within the age range of six to eight years, a major characteristic of infant grades. Children in this age range generally have similar needs, preferences and learning patterns. Because they all came from the same catchment area, their cultures are similar and family backgrounds, therefore, almost of the same status. As a result, findings of this study can be generalised to the target population.

The sample comprised forty girls and thirty-two boys. Stratified random sampling was employed to select the sample. All the children were proficient in Shona and taking English as a second language. Children were divided into two age groups: the six to seven and the seven to eight years. Each age group had eighteen pairs of children, six from each of the three participating schools.

Thirty-six children were, thus, categorised by their teachers as the more capable (bright) while the other thirty-six were identified as the less able, making thirty-six pairs. Class progress records were used to categorise children as either bright or less able. Children whose overall academic performance was well above average were categorised as the more capable (bright) while those whose overall performance was just below average but not extremely bad were categorised as the less able. The class teachers and the researchers went through the class records before children were placed in the two categories in order to determine the correct sample.



## **Data analysis**

Data analysis was carried out at two levels. The first level was the extraction of trends from the observed episodes of the 36 pairs; and the second level included the coding of the frequencies of observed behaviour. The three research questions initially stated were collapsed resulting in two major questions to cater for major trends only in observations of the two categories of the bright and the less able children. Question 1 analysed the strategies used by the bright peers to teach the less able peers and their level of participation. Question 2 analysed the responses by the less able partners to the teaching and their level of participation.

## **Procedure**

A pilot study was carried out to search for the nature of behaviours during co-construction and the frequency of occurrence for the known and unknown behaviours. A trial run of the identified repertoire of co-construction was carried out with an initial sample of ten pairs of infant children from two infant classes from two schools that did not participate in the main study. Observations were done over four days. The results of that pilot indicated that the time segments for coding initially divided into three minute intervals should be changed to one-minute intervals so that the total duration of each task becomes ten minutes. In addition, the reduction of the time intervals was necessary to ensure the behaviours of each interaction and not an overview of it would be captured. The main study was then carried out with thirty-six pairs of children from three primary schools. Observations for the main study were done over a period of two weeks. Results were then analysed and conclusions drawn accordingly.

## **Data Presentation and Discussion**

### **Common Trends in Peer Co-construction**

The study investigated the nature of co-construction of knowledge between the more and less capable children in Zimbabwean infant classes. Focus was on the strategies used by the more capable to teach the less able partner and conversely the response of the less able in peer teaching. The level of participation of the two in the collaboration was of great interest as well.

Tables 1 and 2 show the trends in observed behaviour and the frequency of occurrence of that behaviour from 36 pairs of children that were engaged in peer teaching and learning. Research questions were integrated and common trends only were presented for the two categories, Bright Pupils and Less Able.

### **Research Question 1**

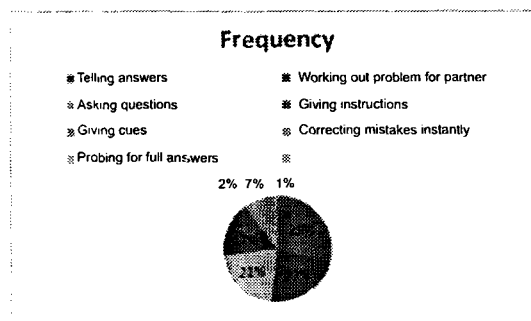
*How do bright children teach their less capable peers and what is their level of participation during co-construction?*

**Table 1: Co-construction Trends In Bright Partners**

Behaviour Observed	Frequency	Number of Pairs
<b>Telling answers</b>	202	36
<b>Working out problem for partner</b>	164	36
<b>Asking questions</b>	152	30
<b>Giving instructions</b>	118	35
<b>Correcting mistakes instantly</b>	51	13
<b>Giving cues</b>	13	8
<b>Probing for full answers</b>	7	2

To answer the question, Table 1 focused on the nature of interaction from the bright partners and their level of participation during co-construction. It, thus, reflected the frequency of occurrence for the various co-construction strategies common in various pairs.

Strategies and trends that emerged from the 36 pairs that were observed in rank of order from the highest to the lowest characterise Table1. The most common co-construction types were telling answers with a frequency of 202 occurrences; working out a problem for a partner (164); asking questions (152) and giving instructions (118). All the thirty-six bright partners (100%) used the first two strategies while 30 (83%) and 35 (97%) were involved in asking questions and giving instructions respectively. It was interesting to note that behaviours/strategies that would facilitate teaching skills of a higher order recorded the lowest frequencies, for example, giving cues (13), correcting mistakes instantly (51) and probing for full answers (7). The number of children that used these strategies was also low recording 8 (22%), 13 (42%) and 2 (6%) respectively. These results, therefore, suggest that the bright children did not possess skills critical for co-construction. The pie chart in Figure 1 shows the percentage distribution of the behaviours observed.



## Figure 1

Figure 1 is a representation of data presented in Table 1.

Overall, the results shown suggest that the majority of bright pupils were preoccupied with telling answers.

During the play back of the video tape, interesting observations were made as researchers would actually pick the actual statement by the bright partners for instance, one pupil asked:

***“6 sets of 2 equals what?...Eh... Do you know the answer? It's 12 put 12 there.”***

The less capable partner was never given the chance to either reflect or attempt to work it out. The observed trend was, ask a question, quickly find out if the partner knew the answer, if not provide it immediately and move on to the next task. In a good number of instances the bright child would grab the pencil and actually write for the partner, like;

***“The answer is 12 ...Can you write 12?”***

The less able partner would shake his/her head and the bright pupil says:

***“OK let me do it for you”***

And he/she grabs the pencil and paper or book and simply writes the answer and hand back the book and pencil to the owner.

In the case of reading, the bright pupil would ask:

***“Can you read this? You can't. OK Say: Bread, brown, bright...”***

He/she would go through the list of words or the passage and the less able would simply parrot without even looking at the print.

Overall, therefore, to the question on how the bright children teach their less able partners, the study found out that young children, though bright, do not possess skills essential for co-construction of knowledge with peers.

## Research Question 2

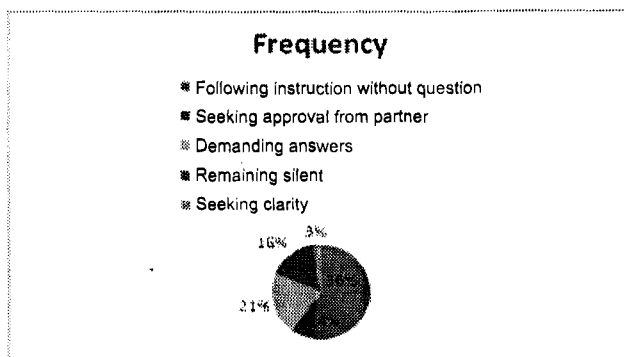
*How do the less competent pupils respond to the more capable partners as their teachers and their level of participation? See Table 2.*

**Table 2:Co-construction Trends In Less Able Partners**

Response	Frequency	Number of Pairs
Following instruction without question	162	36
Seeking approval from partner	105	36
Demanding answers	96	34
Remaining silent	70	30
Seeking clarity	13	9

To answer the question Table 2 focused on the nature of interaction from the less able partners.

Table 2 shows outstanding responses made by the less able peers. These responses were given under two categories, viz, the nature of interaction and level of participation. Only common trends were picked. Thirty- six (100%) less able peers would simply follow the bright partner's instruction without questioning and the frequency of the occurrence was 162. It was observed that, again, all the 36 (100%) less able peers could not work out a given task independently but would always want to seek approval from the bright partner. Such behaviour suggested either lack of confidence or clear instruction. This behaviour recorded the second highest frequency of occurrence which was 105. As pairs worked, a frequency occurrence of 96 was recorded for 34 (94%) children who would not bother themselves to work out a given task but would simply demand the answer from the partner. It was observed that when asked a question, 30 (83%) children would simply remain silent if they did not know the answer, recording a frequency occurrence of 70. The last trend observed was that for anything that the less able peer would not understand, only 9 (25%) children would seek clarity, recording a frequency occurrence of 13. The pie chart (Figure2) shows relationships between and among the responses.

**Figure 2**

Common trends emerged which explained the nature of interaction from the less able partners during co-construction. Because telling answers by the bright pupils characterised most of the collaborative tasks, in response the less able peers tended to passively follow instructions without question. In most cases the less able partner would simply nod the head in agreement or write the dictated answer. The nature of questions asked in few instances also contributed to the passive responses by the less able as most questions used were of low order, demanding either **yes** or **no** answers without provoking thinking or inviting discussion. Results also show that all less able partners tended to seek approval from the bright peers to complete a given task. The less able would constantly look at the bright partner for confirmation before putting down an answer or reading through a sentence, for instance, pronouncing a word in reading, then pausing and asking, **"Is it?"** before proceeding to the next word. There was also a tendency by the less able peers to either remain silent if they did not have an answer or just demand answers as the bright peers would not give cues, clearly explain or demonstrate how to do the task. For example when given a task or asked a question, the less able peer would give any of the following responses \*

***"What should I write?"***

***"Tell me the answer."***

***"Write the spelling for me."***

***"Read it for me."***

The less capable peers, at times, remained silent because the bright partners could not probe further.

Overall, therefore, to the question that sought the less able peers' response to the teaching by the more capable peer, the findings of the study were that the less able peers took a passive role in the intended collaboration. Their contribution, if any, was negligible, hence, no meaningful learning was observed.

## **Discussion**

### **The nature of co-construction**

The answer to the main research question: "What is the nature of co-construction of knowledge between bright children and their less able partners in Zimbabwean infant classes?" is that co-construction of knowledge between partners in Zimbabwean infant classes covered in this study is characterised by the monopoly of the performance of tasks by the bright children on the one hand, and the passive responses of the less able partners on the other hand. It appears that young children in infant classes, though bright, generally do not possess skills

essential for successful co-construction of knowledge with less able peers. This is evidenced by the fact that all bright partners under study were preoccupied with just telling answers. A high frequency of occurrence for this variable was coded. There is a possibility that although these were bright children, they were not able to create a ZPD for their partners to allow them to carry out tasks on their own, but with their support, since most children were just telling answers. No skills like compromising, negotiation, adjusting or recruiting partners' interest were evident. As a result, the less competent partners became observers, thus, adopting the 'free rider' or 'passenger' style of learning (Dunne & Bennett, 1995). Wood (1989) contends that identification of a learner's ZPD to find out what knowledge, skills and understandings have not yet surfaced for the learner but are on the edge of emergence can only be done by an adult teacher.

Findings have shown that bright children also concentrated on asking questions and giving instructions. The two variables also recorded a very high frequency of occurrence. The results were probably influenced by teachers' methods of teaching in infant grades which are usually centred on asking and answering questions. The observations made in the study in relation to questioning may also be explained by a study carried out by Dyanda (1997). She observed that infant teachers ask most questions in the first few minutes of the lesson only and yet questioning is one of the infant child's fundamental tools for navigating the knowledge sphere and the environment generally. It is, therefore, imperative that educators attend to this need early enough. Dyanda (1997) also asserts that most teachers in the infant classes ask low order questions which rarely demand reflective thinking, but just focus on recall skills. It is possible that children in this study were following the questioning models provided by their teachers where no satisfactory co-construction took place, but directing and instructing without the input of the other party.

### **Level of Participation**

As mentioned earlier, the level of participation was mainly characterised by passive collaboration. According to the findings, less able peers simply followed instructions without questioning. The possible explanation to this could be that the bright peers might not have provided enough scaffolding to the level where their less able partners equally contributed, negotiated and shared their ideas. They did not appear to have the skills for giving meaningful hints, clues or direction, which are important skills of co-construction. Alexander (1988) contends that, during collaboration, when novices indicate that they do not understand, the expert should provide or mediate the difficulty by giving clues and supplementary information. There is a possibility, therefore, that child teachers, under study, were not competent enough to simplify tasks, correct misconceptions and adjust to their less competent partners' level of understanding due to their limited

language facility or experience with the art of teaching others. Questions can also be redirected or rephrased, something that the experts in this study failed to do in most cases. Bruner (1968), on mediated learning, argues that when the learner meets difficulty, close monitoring by an adult who can offer assistance is necessary. As the child becomes more proficient, assistance is gradually withdrawn to pave way for autonomy.

The inadequacy of young bright pupils as teachers to successfully employ co-construction skills seems to be prevalent in most classrooms where peer teaching is practised. When asked to help, the bright child usually offers his/her own work for copying. In this study, less able children were often encouraged to copy the more able partners' work, than working out the solutions together through the provision of support such as redirecting answers, asking for opinions when difficulties are experienced. In infant classes, teachers also often use fast learners to provide answers for exercises done as a group. Most teachers seem not to be concerned with how children get answers but want to know if the task has been accomplished. A similar scenario was observed in this study. After assigning a bright child to teach a less able peer, the class teacher never monitored the pair, but instead went on to do other things, waiting for the children to finish the task. It was the bright child who would report that they had finished and the teacher would then simply move on to the next lesson.

If teachers were interested in the process, or in the child's explanation process, there is a high possibility that co-construction of knowledge would take place between the bright child and the less able, consequently modelling bright children on how to interact with their partners during peer teaching and learning. Cooper (1980) points out that in many classrooms, children work in pairs or small groups and their teachers assume they are working together or helping each other, yet that may not be the case. The bright children may be either doing the work for the less competent child or the less competent child may just be following instructions, without question, from the more competent child. One of the findings in this study was that most bright partners worked out problems for the less able partners. This finding is consistent with the argument by Sugrue (1987), that bright children, in collaboration, mostly do the bulk of the work or monopolise the tasks.

For the less able partners, the level of participation was low. They did not seek clarification before, during or after the task signifying low levels of participation. In addition to being controlled by the more competent child because of lack of skills to co-construct, failure to actively participate could also be attributed to either inability to communicate their difficulties to their partners or inability to assert their contribution to the task on hand. Webb (cited in Sharon, 1990) points out that to be able to offer the explanations to their peers, expert children need to

engage in higher level cognitive restructuring in order to make materials more comprehensive. On this note, the results of this study may imply that although in the same grade there were more competent children than others, they may not have been able to take on the task of co-construction because it required them to operate, not only beyond their peers' level of understanding, but also to create an environment in which their peers could thrive and equally contribute to the learning process. Brown and Palincsar (1989) have observed that teachers who develop a culture that encourages explanation and constructive activity in peer-directed small groups, help to maximise the benefits of peer tutoring. The nature of the results of this study may be an indication of the nature of the models of teaching that children are exposed to in their classrooms.

### **The Nature of Language during peer teaching**

The other issue that could explain the passive responses between partners in this study is language. According to Vygotsky (1979), the function of language is two fold. It is used as a medium of communication, and as a cultural tool for thinking. Vygotsky asserts that language is critical for communication as the expert and novice engage in problem solving at the inter-psychological zone. Giving clues, directions or explanations all need a common language to facilitate communication. Since tasks in this study were structured in English there is a high possibility that some of the problems could have been due to lack of efficient oral skills. The lack of communicative skills would further be compounded by the possible lack of cognitive skills to manipulate that language. Cummins (1979) believes that most second language learners struggle with the academic language to communicate their ideas and concepts. Vygotsky also maintains that language is an indispensable tool for thought. It provides a means of expressing ideas. If tasks were presented in familiar language, maybe children could have tried to structure arguments or responses more easily.

### **Conclusion**

The study investigated the nature of co-construction between the more and less capable peers in selected Zimbabwean infant classes. Overall, findings have shown that bright children in infant classes cannot successfully co-construct knowledge with their less able partners. They have difficulties creating an environment in which their peers can thrive or become less and less dependent on their more capable peers which Vygotsky calls the Zone of Proximal Development (ZPD). Teachers who may be influenced by neo-Vygotskians, who believe that using a more capable peer may achieve the same level of co-construction as envisioned by Vygotsky may need to train or model the skills in their classrooms for adoption and adaptation by the more competent children. These results also do caution against an over simplification of Vygotsky's perspective of the expert-novice paradigm.



When Vygotsky talks about experts and novices, his use of the adult as a more capable partner should not be interpreted to mean just another bright or competent child. It is more than the academic competency to the process of having more experience with the process of co-constructing knowledge with others who are the novices who may just require scaffolding. These results have also shown that not all interactions can be termed co-construction, particularly when they are between the same age groups. However, if one wants to use the more competent peers as teachers of the less competent then, educators should not assume cognitive benefits by just pairing a less capable child with a more capable peer. Instead, more attention should be paid to the processes of co-construction of knowledge and not the product alone. Teachers may need to model co-construction in their classrooms. They should model negotiation, assertion of one's own ideas, tolerance of other people's ideas, questioning and corroboration. However, it is important to note that most of these skills are very hard to accomplish with young children because they tend to be more self centred. It might work with adult learners as Greenwood, (1991) observed, that guided peer tutoring with IT students at college level motivates, excites and fights the boredom of traditional classroom instruction.

The study of co-construction of knowledge is important to all educators as co-construction plays a central role in the development of knowledge. The capacity to learn through other more competent people is in itself a fundamental feature of human intelligence and their socio-cultural contexts. In co-construction of knowledge, children can achieve what they would not have if they were left to learn alone as individuals, because usually, children want to seek help if they are confronted with difficult learning material. It is, therefore, important to find out how bright children offer help to their less able peers and also examine how the less able respond to the teaching by their bright peers.

These researchers, though, believe that there is need for further study with learners at a much higher level than infants to see if similar results would be obtained.

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## APPENDIX 1

### Flanders Interaction Analysis Categories (FIAC)

The Flanders Interaction Analysis Categories coding system was used in the study to analyse the interaction between a bright child and a less partner during co-construction of knowledge.

#### SECTION A

1. Pair Code: .....

**Bright Child**

**Less Able Child**

2. Age

6-7 years ☐

6-7 years ☐

7-8 years ☐

7-8 years ☐

3. Gender

Male ☐

Male ☐

Female ☐

Female ☐

#### SECTION B

Background Information To The Task Used In Co construction Of Knowledge

Subject Area

Mathematics and science ☐

Social Sciences ☐

Language Arts ☐

Expressive Arts ☐

Type of Task

Reading ☐

Investigation ☐

Problem Solving ☐

Gap Filling ☐

Construction ☐







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